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Remarks

This Amendment is in response to the Office Action dated September 8, 2004, in which claims 1-3, 7-11, and 14-25, were rejected under 35 U.S.C. §103. The Applicant respectfully traverses the rejections by the Examiner, and for the reasons identified herein, Applicant respectfully submits that the claims as amended herein are in condition for allowance. In the Office Action dated September 8, 2004, the Examiner also rejected claims 1-25 under the judicially created doctrine of obviousness-type double patenting in view of U.S. Patent No. 6,590,502.

DOUBLE PATENTING

Applicant is enclosing herewith a Terminal Disclaimer and fee transmittal documentation directed to U.S. Patent No. 6,590,502. Applicant believes that the enclosed Terminal Disclaimer is in full compliance with 37 C.F.R. §1.321(c) and 37 C.F.R. §1.30(b). Applicant respectfully requests reconsideration and withdrawal of the rejection of the claims 1-25 pursuant to the judicially created doctrine of obviousness-type double patenting.

35 U.S.C. §103

In the Office Action, the Examiner rejected claims 1-3, 7-11, and 14-25, arguing that the claims were obvious under 35 U.S.C. §103 over Schugt U.S. Patent No. 5,934,694 in view of Hall U.S. Patent No. 5,585,783. The Examiner also rejected claims 4, 5, 12, and 13, under 35 U.S.C. §103, asserting the same to be unpatentable over Hall '783 in view of Deese '965. Further, Claim 6 was rejected by the Examiner under 35 U.S.C. §103 which the Examiner asserted to be unpatentable over Schugt '694 in view of Hall '783 and in further view of Miyamoto '681. Applicant respectfully submits that there is no suggestion, teaching, or motivation presented in the Hall '783, Schugt '694, Deese '965, and/or Miyamoto '681 references either explicitly or implicitly, to provide Applicant's invention herein. There is no

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suggestion in Hall '783 that the simultaneous illumination of different light signals and/or combination, pattern, or sequence of light signals ought to be tried.

In the Office Action dated September 8, 2004, the Examiner has alleged that Hall teaches:

"a controller U1 in communication with light sources for selectively activating the LED's thereby producing more than two different types of visually distinct warning light signals (that is, continuous, flashing, or rotating) (see Fig. 5), the LED receiving power from a power source wherein the light support. Therefore, it would have been obvious to one of ordinary skill in the art to use a warning light of Hall's in the system of Schugt because the warning light in Hall would attract a viewers attention more than the light in Schugt since it is capable of producing many types of lighting effect."

Applicant respectfully traverses the assertion as to what Figure 5 of the Hall '783 reference discloses and/or teaches when reviewed in association with the '783 specification. Figure 5 is a block diagram of the separate flashing circuitry, separate continuous illumination circuit, and separate sequencing circuitry used in accordance with the Hall '783 specification to produce the desired singular flashing or non-flashing light pattern. Figure 5 of the Hall '783 reference discloses three unique and separate pathways for power to be provided to a light array. In the left pathway, the power passes from a power source through a flasher circuit to the light array. In the separate and distinct middle pathway, the power passes from a power source directly to a light array to illuminate the entire light array, such as turning on a light switch. In the separate and distinct right pathway, power passes through a sequencer circuit to the light array.

No disclosure is provided for a connection between the left and middle pathways of the Hall '783 reference in Figure 5. No disclosure is provided for a connection between the left and right pathways of the Hall '783 reference in Figure 5. No disclosure is provided for a connection between the middle and right pathways of the Hall '783 reference in Figure 5.

Applicant respectfully asserts that the left pathway of Figure 5 of the Hall '783 reference discloses a single and exclusive type of light signal, namely a flashing light signal.

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Applicant respectfully asserts that the middle pathway of Figure 5 of the Hall '783 reference discloses another single and exclusive type of light signal, namely a light signal that is continuously on when power is applied.

Applicant respectfully asserts that the right pathway of Figure 5 of the Hall '783 reference discloses yet another single and exclusive type of light signal, namely a sequencing light signal through a sequencer circuit.

Figure 5 of the Hall '783 reference does not show any crossover between the pathways. Figure 5 of the Hall '783 reference does not disclose the simultaneous illumination of at least two pathways, or the illumination of at least two pathways in at least one combination or pattern.

Applicant's analysis of Figure 5 is consistent with, and is supported by, a review of the specification of the '783 patent which states at column 3, lines 54-59; "a presently preferred embodiment of the present invention further includes an electronic circuit integral with or carried on the bendable circuit board for continuously illuminating the array of light emitting diodes or for intermittently turning the array of light emitting diodes on and off at a predetermined interval so as to provide a flashing light" (emphasis supplied); column 3, lines 64-67 state "an electronic sequencer circuit is carried on the bendable printed circuit board for intermittently turning the light emitting diodes on and off at predetermined time intervals to provide the appearance of a rotating beacon"; column 6, lines 4-7 state "the other end of each string is either connected by means of negative lead 20, to negative terminal 20a of power source 28, or, in the alternative, to a control circuit, which can either be flasher circuit 36 or a sequencer circuit 38" (emphasis supplied); column 6, lines 12-14 state "connection directly to negative terminal 20a results in continuous illumination of the light emitting diodes" (emphasis supplied); column 6, lines 28-31 state "however, that other suitable switches such as a three-way switch and the like may be employed to allow one to choose between a flashing LED pattern and a steady-on state in addition to being able to turn off the device" (emphasis supplied); and column 7, lines 57-61 state "most preferably, includes sequencer circuit 38 instead of flasher circuit 36. Accordingly, sequencer circuit 38 causes LEDs 1-40 to intermittently turn on and off at predetermined time intervals to provide the appearance of a rotating beacon".

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All of these statements from the specification of the '783 Hall reference are consistent, and disclose nothing more than a separate flasher circuit; a separate sequencer circuit; a separate continuous circuit; and a manual switch to activate one and only one of the circuits at any given time. In addition, all of the statements from the specification of the Hall '783 reference are silent and fail to disclose that a light signal may change from one light signal to another light signal without human activation of a switch. The specification of the Hall '783 reference is completely silent and fails to teach, suggest, or disclose that a simultaneous or a combination light signal may be provided as formed of at least two visually distinct warning light signals.

The specification of the '783 patent at column 3, lines 53-59; column 6, lines 12-14; column 6, lines 28-31; column 7, lines 41-49; column 7, lines 57-61; and column 8, lines 6-7 in conjunction with Figure 3 all indicate, that all LEDs 16 in array or as on circuit board 32, namely LED's numbered 1-40, are provided with only one type of light signal at a time where the individual signal may be continuous, flashing, or sequencing.

Applicant respectfully directs the Examiner's attention to the attached Declaration of Roman Marjamaa which is incorporated by reference herein in its entirety.

The Declaration of Roman Marjamaa and attached marked-up Figure 3 indicates that the Hall '783 reference discloses a circuit U1 which simultaneously controls all LEDs 1-40. The circuitry of Figure 3 of the Hall '783 reference discloses one, and only one, output labeled as Q1 on the marked-up figure attached to the Declaration of Roman Marjamaa. In addition, the Hall '783 patent at column 5, lines 20-25 indicates that the circuit U1 is an industry standard 555 stable multi-vibrator circuit with driver transistor. Electrical specifications and descriptions for the industry standard 555 stable multi-vibrator circuit have been attached to the Declaration of Roman Marjamaa as Exhibit 2. The electrical specifications and description indicate that the industry standard 555 circuit includes only a single output. The existence of only a single output on the industry standard 555 circuit physically restricts and limits the circuit to the illumination of a single light signal at any time. It is physically impossible for the circuit of Figure 3 of the Hall '783 reference and/or the industry standard 555 circuit U1 to illuminate more than one light signal at a time. It is also physically impossible for the circuit of Figure 3 of the Hall '783 reference and/or the industry standard 555 circuit U1 to change light signals without activation of

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a switch through human intervention. The circuit of Figure 3 of the Hall '783 reference and/or the industry standard 555 circuit U1 are physically incapable of producing at least two different visually distinct warning light signals simultaneously or in combination.

The circuit U1 permits electricity to flow from battery to the gate or switch located at "Q1" which most probably is a transistor. Electricity flows past "gate Q1" through "node labeled A". Each string of LEDs is in electrical communication with "node A" where electricity flows outwardly to two LEDs as drawn above "node A" and simultaneously to two LEDs as drawn below "node A" on each individual string at the same time.

The circuit of Figure 3 depicts all LED's 1-40 receiving power at the same time from pin 3 of circuit U1 **for illumination of the identical light signal within all of the LED's of the array.** Hall '783 only discloses the use of a single output which limits the Hall '783 device to a single light signal at a time. All LED's 1-40 are exclusively connected to "node A" which is the only electrical connection to circuit U1. All ten strings of LED's 1-40 must illuminate simultaneously with the same signal when output power exits pin 3.

It is not electrically possible for the circuit depicted in Figure 3 to turn on select individual strings of LED's because all of the strings containing LED's are commonly connected to "node A". In addition, there exists a total absence of separate electrical connections of each string of LED's to a source of power other than "node A". "Node A" receives **one and only one** signal from U1. All LED's 1-40 are engaged upon the application of power to provide an identical type of light signal.

This analysis of the circuit depicted in Figure 3 is consistent with the Hall '783 specification, particularly with the summary, which states that the invention **"intermittently turns the array... on and off"** and in column 7, beginning at line 41 where Hall discloses the preferred embodiment and the second preferred embodiment which states:

"electrical circuit 32 for continuously illuminating LED's 16 when power source 28 is activated by switch 29. Additionally, electrical circuit 32 includes flasher circuit 36 for intermittently turning LED's 1-40 on and off in a predetermined time interval, most preferably 1pps, to provide a flashing light when flasher 36 is activated by switch 29." (Emphasis supplied.)

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The specification at column 6, lines 44-48; at column 7, lines 43-49; and at column 8, lines 6-8, merely disclose that a composite circuit board may include the separate and distinct flasher circuit, or the separate and distinct sequencer circuit, and separate and distinct continuous circuit. This language of the specification does not disclose, teach, or suggest, that at least two circuits may be illuminated simultaneously. This language of the specification does not disclose, teach, or suggest, that at least two circuits may be illuminated in combination to provide a pattern warning light signal.

The teaching of simultaneous illumination of at least two warning light signals is not taught by the Hall '783 reference. The teaching of the illumination of at least two warning light signals in at least one combination and/or the provision of at least one pattern of at least two warning light signals is not taught by the Hall '783 reference.

In regards to the Examiner's obviousness rejection of claims 1-3, 7-11, and 14-25, under 35 U.S.C. §103, Applicant respectfully submits that there is no suggestion, teaching, or motivation presented in either Hall '783, Schugt '694, Deese (U.S. Patent No. 5,806,965), or Miyamoto '681, either explicitly or implicitly, for combining the references. (*In re Clinton*, 527 F.2d 1226, 188 USPQ 265 (CCPA 1976)) There is no suggestion in Hall '783 that the simultaneous illumination of different light signals and/or combination, pattern, or sequence of light signals out to be tried.

The attached Declaration of Roman Marjamaa indicates, and Applicant respectfully asserts herein, that Applicant's invention is not obvious to a person of ordinary skill in the art in view of the Hall '783 reference. Specifically, a person skilled in the art upon review of the Hall '783 patent would not have been able to use the disclosure to conceive, design, and create a controller which would generate at least two different types of light signals either simultaneously and/or in combination. To provide a controller capable of regulating a composite lighting effect where two or more different light signals were either generated simultaneously and/or in combination, a person skilled in the art would have scratched the Hall '783 disclosure and would have initiated a complete redesign from ground zero. "U1" has a single output which is physically incapable of any cooperative interrelationship with any additional industry standard

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integrated 555 circuit as disclosed in the Hall '783 patent. A substantial modification and complete electrical redesign of the Hall '783 electrical components would be required to provide for Applicant's invention herein. A person skilled in the art attempting to design a controller capable of illuminating two different light signals simultaneously and/or in combination would have been required to look significantly beyond the Hall '783 disclosure to accomplish the desired result. A person skilled in the art upon reading the Hall '783 reference would not have been able to make the invention as disclosed in the current application and as claimed herein. The electrical components and circuits described in the Hall '783 patent are physically incapable of illuminating more than one single light signal and are physically incapable of cooperation to provide a combination light signal. Applicant's invention is not obvious to a person of ordinary skill in the art in view of the Hall '783 patent.

The Schugt '694 reference is directed to a vehicle for retrieving shopping carts which includes a rotating beacon mounted on the top of an antenna pole. The Examiner has asserted that the Schugt '694 reference teaches the use of a warning signal light in association with a vehicle and that the warning light is movable with respect to the motorized vehicle. The Schugt '694 reference teaches the use of an LED switch 120 to count slots in the tachometer disc 118 for determination of the rotational speed of the tachometer disc 118. This rotational rate is used to prevent the motor from rotating above a determined speed generally 5 to 7 miles per hour.

The Schugt '694 reference does not teach or disclose the use of at least one controller for the provision of at least two different types of visually distinct warning light signals simultaneously and/or in at least one combination.

The Schugt '694 reference is silent and does not teach any information with the exception that a rotating beacon may be attached to a device used to retrieve shopping carts. Applicant herein respectfully asserts that the Schugt '694 reference is directed to such a removed and non-analogous art as to be non-applicable herein. In addition, Applicant respectfully asserts that the Schugt '694 reference is non-analogous art as applied to Applicant's claims herein. Applicant respectfully requests that the Examiner reconsider and withdraw the obviousness rejection of claims 1-3, 7-11, and 14-25, pursuant to 35 U.S.C. §103 in view of the combination of Hall '783 and Schugt '694.

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There is no teaching that the beacon light source and/or light signal of Schugt '694 may include the use of LEDs. Applicant respectfully asserts that there is no suggestion, teaching, or motivation to use an LED in the rotating beacon of Schugt '694 individually and/or in combination with Hall '783. Also, there is no teaching, suggestion, or motivation provided in Schugt '694 to use more than one type of light signal in association with the rotating beacon for a shopping cart retrieval device. In addition, there is no teaching, suggestion, or motivation to use a rotating beacon with a sequencer circuit. There is no teaching, suggestion, motivation to use a rotating beacon with a flasher circuit. Therefore, there is no teaching and/or suggestion to combine Schugt '694 with Hall '783 for purposes of 35 U.S.C. §103. Furthermore, there is no teaching and/or suggestion to combine Hall '783 with Schugt '694 for purposes of 35 U.S.C. §103. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection pursuant to 35 U.S.C. §103 in view of the asserted combination of Schugt '694 in view of Hall '783.

The Declaration of Roman Marjamaa as attached hereto and incorporated by reference herein asserts that the teaching of a composite light signal formed of two light signals simultaneously, or two light signals in combination, is not obvious and is not taught in the Hall '783 reference. The Declaration of Roman Marjamaa further asserts that in order to provide for a plurality of available light signals, for illumination of two or more light signals simultaneously, or two or more light signals in combination, that a significant physical modification and an electrical redesign of all of the circuits as disclosed in the Hall '783 reference would have been required.

The Declaration of Roman Marjamaa has also addressed the Schugt '694 patent which is directed to a rotating beacon mounted on a pole as connected to a device used to retrieve shopping carts from a parking lot. Mr. Marjamaa has asserted that the Schugt '694 patent does not address the problems identified as related to the generation of two or more different types of light signals either simultaneously and/or in combination. It is Mr. Marjamaa's opinion and Applicant asserts herein, that the invention described in the present application would not have been obvious to a person of ordinary skill in the art following a review of the Hall '783 patent and a review of the Schugt '694 patent either individually and/or in combination.

The Examiner has also rejected claims 4, 5, 12, and 13, under 35 U.S.C. §103 as

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being unpatentable over Hall '783 in view of Deese '965. Applicant respectfully traverses the Examiner's rejection of claims 4, 5, 12, and 13, as being obvious over Hall '783 in view of Deese '965. The Deese reference discloses LED's of different colors. The term "patterns" of the Deese '965 reference is exclusively used to refer to a collection of individual colored LED's to provide a particular color such as white. For example, at column 7, last paragraph, Deese discloses the use of LED's of blue-green; yellow; red-orange, to attempt to provide a white light. No disclosure is provided in Deese '965 to provide a combination of at least two visually distinct warning light signals into an observable pattern formed of the at least two different types of visually distinct warning light signals. In addition, no disclosure is provided in Deese '965 to provide at least two different types of visually distinct warning light signals simultaneously.

There is no suggestion in Deese '965 that different colored LED's should be combined with either flasher or sequencer circuits, either individually or in combination. Furthermore, Applicant respectfully disagrees with the Examiner's assertion that Deese teaches "controlling the LEDs" (emphasis supplied). Applicant respectfully submits there is no control over which LEDs will illuminate once the LEDs are assembled with the circuit board. Power is simply applied to the Deese LED Beacon Light and whichever color LEDs were mounted onto the circuit board will subsequently illuminate. The circuit schematic of Fig. 6 of Deese shows no controller. Deese contains no suggestion, teaching, or motivation to use "a controller in electric communication with the light emitting diodes".

Hall '783 is directed to a light signaling device which includes a plurality of electrical lights arranged to enable generated light signals to be viewable from different locations. Deese '965 is directed to a generally cylindrical shaped beacon light in which a plurality of LEDs provide a desired color of light. The suggested combination of the Hall '783 and Deese '965 references would not result in the elements of the present claims. In addition, there is no motivation provided by either or both of the cited references which would suggest the desirability of the combination. This non-suggested combination fails to teach at least one controller which is in electric communication with light emitting diodes for selectively activating the light emitting diodes to create at least two different types of visually distinctive warning light signals simultaneously and/or in combination.

In order for the combination of Hall '783 and Deese '965 to be made, the

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references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination (see *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462; 221 USPQ 481, 488 (Fed. Cir. 1984)).

Hall '783 is a free-standing marker light designed for Amish buggies or to mark hazards (see column 1, lines 9-17). Deese '965 is directed to an LED beacon for provision of light of a desired color which is designed for use in a standard incandescent bulb fixture (see column 4, line 66 - column 5, line 9). There is no motivation to provide the free-standing marker light of Hall with the mountable beacon of Deese '965.

No suggestion, motivation, or teaching is provided in the Deese '965 reference for incorporation of colored LED's into a device controlled by at least one controller used to simultaneously generate at least two different types of visually distinct warning light signals. No suggestion, motivation, or teaching is provided in the Deese '965 reference for incorporation of colored LED's into a device controlled by at least one controller to generate at least two different types of visually distinct warning light signals in at least one combination. No suggestion, motivation, or teaching is provided in the Deese '965 reference for combination with any other reference to simultaneously generate at least two different types of visually distinct warning light signals. No suggestion, motivation, or teaching is provided in the Deese '965 reference for combination with any other reference to provide the illumination of at least two visually distinct warning light signals in at least one combination.

The stated purpose of Deese '965 reference for use in traffic signals when applied to Applicant's claims herein would be destroyed, in that, the simultaneous generation of at least two different types of visually distinct warning light signals would not function with respect to a traffic signal indicator. To effectively and safely control traffic, a traffic signal must produce only one light signal for traffic control purposes at any given time. It would destroy the purpose of the traffic signal to produce conflicting light signals simultaneously or to produce multiple light signals in combination.

Applicant respectfully submits that Deese '965 is directed to a beacon light which may include LED's of more than one color to provide a composite overall white light signal. There is no teaching, suggestion, or motivation in Deese '965 to use at least one "controller in electric communication with the light emitting diodes", to control the patterns and/or sequences

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of different types of LED light signals.

In Deese '965, the principle of operation is that a power supply provides high voltage power to a preestablished collection of colored LEDs for illumination in a constant, non-flashing white light signal. Any alleged combination with Hall '783 to produce either a flasher circuit or sequencer circuit, either individually or in combination, would improperly "require a substantial reconstruction and redesign of the elements shown in Deese and Hall as well as a change in the basic principle under which the Deese and Hall construction was designed to operate." (*In re Ratti*, 270 F.2d at 813, 123 USPQ at 352.).

One of ordinary skill in the art would recognize that a complete "redesign" would be required to modify the Deese '965 and/or Hall '783 references to produce a DC circuit with at least one controller in order to control the LED operation. And, one of ordinary skill in the art would also recognize that most likely a complete "redesign" would be required to modify the Deese '965 and Hall '783 references to produce a DC circuit with at least one controller in order to control the LED operation. In addition, a redesign is required to make the Hall '783 reference operational as a result of the inherent short of Figure 3. As currently designed, the Deese '965 reference is a high voltage DC circuit which, if left unmodified and combined with at least one controller designed for a low voltage DC circuit, would in all likelihood result in the destruction of the at least one controller. The Applicant respectfully asserts that the obviousness rejection based on a combination of Hall '783 with Deese '965 is improper because the intended purpose of Hall '783 is destroyed by the combination of Hall '783 with Deese '965. (*In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir 1984).

Obviousness cannot be established by merely combining the teachings of the prior art to produce the claimed invention, absent a teaching or suggestion supporting the combination. (*In re Fine*, 5 USPQ 2d, 1596 (1988) (Fed. Cir. 1989); see also *In re Laskowski*, 10 USPQ 2d 1397 (Fed. Cir. 1989)). Applicant respectfully requests that the Examiner allow claims 4, 5, 12, and 13, in view of 35 U.S.C. §103. To combine the references without some teaching, suggestion, or motivation to do so constitutes the impermissible use of hindsight in violation of *In re Dembiczak* (50 U.S.P.Q.2d 1614 (CAFC 1999)) as well as *W.L. Gore & Associates, Inc. v. Garlock, Inc.* (721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

The Examiner rejected claims 15-25 where the Examiner stated in the Office

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Action in reference to Schugt '694 and Hall '783 that:

“both reference suggest the use of different LED pattern to cause visual effect. Thus, it would have been obvious to one skilled in the art to use any pattern of signals as desired. It is only a matter of choice in design as to what pattern the lights should have.”

In regards to claims 15-25, the Applicant respectfully submits that Hall '783 merely discloses the illumination of one of two choices related to individual and independent types of illumination signals. The rejection of claims 15-25 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the Examiner reconsider and withdraw the rejection of claims 15-25 pursuant to 35 U.S.C. §103.

Hall '783 discloses a beacon having a simplistic flasher circuit or a sequencer circuit. Hall '783 does not teach, disclose, nor suggest a controller for incorporation into an LED warning signal light.

In order to create an operational controller of Applicant's invention, problems such as the individual control over multiple segments of LED's; multiple connections of segments of LED's to a controller; operation of at least one controller to independently illuminate individual and/or groups of LED's, where other LED's or groups of LED's are controlled to receive a different type of light signal; the interaction of LED's or groups of LED's as regulated by the at least one controller to provide a desired combination or pattern of composite light signal; and heat issues were required to be considered. None of these problems were present, considered, addressed or taught, in the simplistic beacon device as disclosed in the Hall '783 reference. The solutions to these problems are not trivial and require a complete electrical redesign of a Hall device, are not obvious and do not constitute a choice in design, especially when a completely different problem is to be solved.

It was not a matter of design choice and it is not obvious to create, incorporate and utilize at least one controller into a warning signal light for the provision of either at least two visually distinct warning light signals simultaneously or for the provision of at least two visually distinct warning light signals in at least one combination. (See Declaration of Roman Marjamaa) The technology required to accomplish and solve the problems identified above were

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not identified or disclosed in the Hall '783 reference.

The Examiner's assertion as to the illumination of at least two different types of visually distinct warning light signals in at least one combination as being merely a matter of choice in design is inconsistent with the affidavit of Roman Marjamaa as attached hereto.

The Hall '783 reference is directed to simplistic independent circuitry. The Hall '783 reference requires that a selection be made in order to illuminate a single type of light signal within a beacon. This simplistic technology did not teach the simultaneous illumination of at least two different types of visually distinct warning light signals, nor did this simplistic technology teach the illumination of at least two different types of visually distinct warning light signals in at least one combination. The Hall '783 device is physically incapable of generating these types of light signals.

Applicant therefore respectfully traverses the Examiner's rejection of Applicant's claims herein pursuant to 35 U.S.C. §103 as being a matter of choice and design in view of the Hall '783 reference.

Applicant respectfully requests the Examiner to provide a declaration pursuant to 37 C.F.R. §1.104(d)(2) that the illumination of at least two different types of visually distinct warning light signals simultaneously and the illumination of at least two different types of visually distinct warning light signals in at least one combination is a matter of design choice in view of the Hall '783 reference and in view of the declaration of Roman Marjamaa attached hereto and incorporated by reference herein.

Further, the alleged combination as asserted by the Examiner as related to the illumination of a continuous and sequential (rotating) light signal is not supported by the Hall '783 reference and would be in fact inoperable even if it were disclosed, which it is not. Hall '783 requires a manual switch to change between a "constantly on" signal and, in the alternative, a change of the switch to activate a sequencer circuit for illumination of a "sequential light signal". The illumination of a "continuous light signal" as disclosed in Hall '783 is achieved by activation of the switch, which turns on all of the LED's, until such time as power is terminated, usually by disengagement of the switch. The engagement of a "sequencer circuit" simultaneously with a "continuously on light signal" as alleged, which Applicant asserts is not physically possible, will have no visible impact and will render the sequencing circuit inoperable because

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all of the LED's are already on and illuminated. The disclosure of Hall '783 is directed to all of the LED's being illuminated with the identical light signal at any given time. No disclosure is provided in the Hall '783 reference that a portion of the LED's may receive a constant supply power where another portion of the LED's receive power as regulated or controlled by sequencer circuit.

In addition, Figure 3 of the Hall '783 reference as attached to the Declaration of Roman Marjamaa is inoperable and would short the circuit U1 preventing illumination of a flashing or continuously on light signal. Figure 3 of the Hall '783 reference indicates that three lines labeled voltage are connected to both the positive and negative terminals of the battery. This would result in a short in the circuit. The three lines labeled voltage, in order to be operable, are required to be electrically connected exclusively to the positive terminal of the battery. The negative terminal of the battery is required to be electrically connected to ground on the industry standard 555 circuit U1, and it is not. The VCC pin of Figure 3 is required to be connected to the positive terminal of the battery, not the negative terminal. The specification for the industry standard 555 circuit requires that the VCC pin have a positive voltage exceeding 4.5 volts. The VCC pin is disclosed as being connected to the negative terminal having a negative voltage which therefore does not exceed 4.5 positive volts as required. The electrical circuit of Figure 3 of the Hall '783 reference as depicted would short and not be operable for the provision of a light signal.

Applicant respectfully further submits that any modification or combination of prior art that would change the principle of operation of the prior art cannot establish obviousness. Applicant respectfully submits that Figure 3 of the Hall '783 reference requires substantial modification in order to be operable and therefore may not be used as prior art in support of an assertion of obviousness of Applicant's claims. In addition, even if modifications were to be made to make the Hall circuit of Figure 3. operable, the hypothetically modified circuit would fail to disclose the elements of applicant's claims due to the restriction of the industry standard 555 circuit U1 to a single output for generation of a single signal.

In regards to claim 15, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, in combination,

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wherein the at least two different types of visually distinct warning light signals are generated simultaneously in any combination. For the above-identified reasons, the rejection of claim 15 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the Examiner reconsider and withdraw the rejection of claim 15 pursuant to 35 U.S.C. §103.

In regards to claim 16, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, in combination, wherein the at least two different types of visually distinct warning light signals are generated alternatively in any combination. For the above-identified reasons, the rejection of claim 16 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the Examiner reconsider and withdraw the rejection of claim 16 pursuant to 35 U.S.C. §103.

In regards to claim 17, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, in combination, wherein the at least two different types of visually distinct warning light signals are generated in a regular pattern. For the above-identified reasons, the rejection of claim 17 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the Examiner reconsider and withdraw the rejection of claim 17 pursuant to 35 U.S.C. §103.

In regards to claim 18, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated in an intermittent pattern. For the reasons indicated above, rejection of claim 18 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 18 pursuant to 35 U.S.C. §103.

In regards to claim 19, the Applicant respectfully submits that, no suggestion,

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disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated in an irregular pattern. For the above-identified reasons, rejection of claim 19 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 19 pursuant to 35 U.S.C. §103.

In regards to claim 20, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated in an regular sequence. For the above-identified reasons, the rejection of claim 20 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 20 pursuant to 35 U.S.C. §103.

In regards to claim 21, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated in an intermittent sequence. For the above-identified reasons, rejection of claim 21 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 21 pursuant to 35 U.S.C. §103.

In regards to claim 22, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated in an irregular sequence. For the above-identified reasons, rejection of claim 22 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching

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of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 22 pursuant to 35 U.S.C. §103.

In regards to claim 23, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated at regular intervals. For the above-identified reasons, the rejection of claim 23 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 23 pursuant to 35 U.S.C. §103.

In regards to claim 24, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated at intermittent intervals. For the above-identified reasons, the rejection of claim 24 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 24 pursuant to 35 U.S.C. §103.

In regards to claim 25, the Applicant respectfully submits that, no suggestion, disclosure, or motivation is provided in Hall '783 for at least one controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination, or wherein the at least two different types of visually distinct warning light signals are generated at irregular intervals. For the above-identified reasons, the rejection of claim 25 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the examiner reconsider and withdraw the rejection of claim 25 pursuant to 35 U.S.C. §103.

Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claims 1-3, 7-11, and 14-25, pursuant to 35 U.S.C. §103.

Claims 12 and 13, appear to have been rejected in the Office Action under 35

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U.S.C. §103 as being unpatentable over Hall '783 in view of Deese '965 and further in view of Schugt (US Patent No. 5,934,694).

Applicant's analysis of the Hall '783 reference, Schugt '694, and the Deese '965 references with respect to the issue of obviousness as indicated above is equally applicable herein.

The Declaration of Roman Marjamaa also asserts that the Deese '965 patent as directed to the use of colored LED's to form a light signal does not address the problems which have been identified related to the generation of two or more different types of light signals either simultaneously and/or in combination. Mr. Marjamaa has rendered his opinion that the invention described in the present application would not have been obvious to a person of ordinary skill in the art following a review of the Hall '783 patent and the Deese '965 patent either individually and/or in combination.

The Declaration of Roman Marjamaa further indicates that it is his opinion that the invention described in the present application would not have been obvious to a person of ordinary skill in the art following a review of the Hall '783 patent; a review of the Deese '965 patent; and/or a review of the Schugt '694 patent either individually and/or in combination.

Applicant respectfully asserts that it is essential to consider all elements of the claimed invention. (*Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 19 USPQ2d 1111 (Fed. Cir. 1991) Also, the claimed invention must be considered as a whole. (*Jones, supra*). The fact that all the elements of the claimed invention were not previously disclosed, as a whole, in Deese '965, Hall '783, Schugt '694, or a combination thereof, precludes proper rejection pursuant to 35 U.S.C. §103.

It is legally improper to focus on the obviousness of substitutions and differences between the claimed invention and the prior art rather than on the obviousness of the claimed invention as a whole relative to that prior art (Emphasis added). (*Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1383, 231 USPQ 81, 93 (Fed. Cir. 1986).

Applicant respectfully further submits that Schugt '694 does not suggest, teach, or provide any motivation for using a warning signal light constructed and arranged to...produc[e] at least two different types of visually distinct warning signals either simultaneously or in combination, on either utility or emergency vehicles. Without such a suggestion, teaching, or

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motivation, Applicant again respectfully asserts that obviousness cannot be established simply by combining the teachings of the prior art to allegedly produce the claimed invention (*In re Fine, supra*).

Claim 6 was also rejected by the Examiner in the Office Action under 35 U.S.C. §103 as being unpatentable over Schugt '694 in view of Hall '783 and further in view of Miyamoto '681.

Applicant's analysis of the Hall '783 reference and Schugt '694 reference with respect to the issue of obviousness as indicated above is equally applicable herein.

Also, the Examiner rejected claim 6 indicating that the use of a directional indicator is conventional in the art. However, Applicant respectfully submits that a claim dependant from an allowable claim is also allowable. Therefore, Applicant respectfully requests that the Examiner allow claim 6 in view of 35 U.S.C. §103. In addition, no suggestion, disclosure, or motivation is provided in Hall '783 for a controller capable of illuminating at least two different types of visually distinct warning light signals, simultaneously and/or in combination where one of the light signals is a directional indicator. The rejection of claim 6 as being obvious in view of 35 U.S.C. §103 impermissibly uses the hindsight teaching of Applicant's invention against Applicant's claims. Applicant respectfully submits that the Examiner reconsider and withdraw the rejection of claim 6 pursuant to 35 U.S.C. §103.

Claims 2-8; 10-13; and 15-25; are dependent claims originating from independent claims 1, 9, and 14, respectively, and Applicant respectfully submits that, as argued above, "dependent claims are non-obvious under §103 if the independent claims from which they depend are non-obvious". Therefore, the rejections of claims 2-8, 10-13, and 15-25 are improper and these claims should be allowed in view of 35 U.S.C. §103.

Applicant respectfully further submits that any modification or combination of prior art that would change the principal of operation of the prior art cannot establish obviousness. Any alleged combination of Hall '783 to produce at least two different light signals simultaneously or in combination, would improperly require a substantial reconstruction and redesign of the elements shown in Hall '783 as well as a change in the basic principle under which the Hall '783 device was designed to operate. (*in re rattl*, 270 F.2d at 813, 123 U.S.P.Q. at 352).

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There is no suggestion, teaching, or motivation in either Hall '783 or Schugt '694 individually and/or in combination to provide for a warning light on an emergency vehicle. Hall '783 discloses using the warning light on an Amish buggy while Schugt '694 discloses using a rotating beacon on a vehicle adapted to retrieve shopping carts. Applicant respectfully asserts that the rejection of claims herein pursuant to 35 U.S.C. §103 impermissibly utilizes hindsight "where that which only the inventor taught is used against its teacher" (*in re Dembiczak*, 50 U.S.P.Q.2d 1614 (CAFC 1999)). Furthermore, as argued above, there is no suggestion, reason, or motivation presented in either Hall '783 or Schugt '694, either explicitly or implicitly, for combining the two references. The Applicant respectfully submits that it is improper to merely substitute the warning light of Schugt with the LED light sources of Hall in attempting to establish the rejection in view of 35 U.S.C. §103. Without evidence of such a suggestion, teaching, or motivation, the Examiner is simply taking the inventor's disclosure as a blue print for piecing together the prior art to defeat patentability, which is the essence of hindsight. (*Dembiczak, supra*) Applicant respectfully requests that the Examiner allow claims 1-25 in view of 35 U.S.C. §103.

Applicant respectfully asserts that there is no suggestion, teaching, or motivation to use an LED in the rotating beacon with a sequencer circuit. There is no teaching, suggestion, or motivation to use a rotating beacon with a flasher circuit. Therefore, there is no teaching and/or suggestion to combine Schugt '694 with either Hall '783 for purposes of 35 U.S.C. §103. Furthermore, there is no teaching and/or suggestion to combine Schugt '694 with Hall '783 or Hall '783 with Schugt '694 for purposes of 35 U.S.C. §103. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection pursuant to 35 U.S.C. §103 in view of the asserted combination of Hall '783 in view of Schugt '694.

Applicant herein respectfully asserts that the Schugt '694 reference is directed to such a removed and non-analogous art as to be non-applicable herein. In addition, Applicant respectfully asserts that the Schugt '694 reference is non-analogous art as applied to Applicant's claims herein. Applicant respectfully requests the Examiner reconsider and withdraw the obviousness rejection of the claims herein pursuant to 35 U.S.C. §103 in view of the combination of Hall '783 and Schugt '694.

In addition, the declaration of Roman Marjamaa and Applicant respectfully asserts

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that the teaching of a composite light signal formed of two light signals simultaneously, or two light signals in combination, is not obvious and is not taught in the Hall '783 reference. In order to provide a plurality of available light signals, for illumination of two or more signals simultaneously, or two or more signals in combination, a significant modification and the electrical redesign of all of the circuits as disclosed in the Hall '783 reference would be required.

In addition, the declaration of Roman Marjamaa and Applicant respectfully asserts herein that Schugt '694 does not address the problems which have been identified related to the generation of two different types of light signals either simultaneously or in combination and the invention described in the present application would not have been obvious to a person of ordinary skill in the art following a review of the Hall '783 patent and a review of the Schugt '694 patent either individually and/or in combination.

In regards to the Examiner's obviousness rejection of claims 51, 52, and 58-68, under 35 U.S.C. §103, Applicant respectfully submits that there is no suggestion, teaching, or motivation presented in either Hall '783 or Miyamoto (U.S. Patent No. 5,809,681), either explicitly or implicitly, for combining the two references. (*In re Clinton*, 527 F.2d 1226, 188 USPQ 265 (CCPA 1976)) There is no suggestion in Hall '783 that the simultaneous illumination of different light signals and/or combination, pattern, or sequence of light signals out to be tried. The Miyamoto '681 reference discloses a directional indicator. No disclosure is provided in Miyamoto '681 to provide a combination of at least two visually distinct warning light signals into an observable pattern formed of the at least two different types of visually distinct warning light signals. In addition, no disclosure is provided in Miyamoto '681 to provide at least two different types of visually distinct warning light signals simultaneously.

There is no suggestion in Miyamoto '681 that a directional indicator should be combined with LED's or should be combined with either flasher or sequencer circuits, either individually or in combination. Miyamoto '681 contains no suggestion, teaching, or motivation to use "a controller in electric communication with the light emitting diodes".

Hall '783 is directed to a light signaling device which includes a plurality of electrical lights arranged to enable generated light signals to be viewable from different locations Miyamoto '681 is directed to a flat horizontal traffic sign which collects or redirects light to illuminate a single preset word or symbol. To change a word or symbol, the collection of

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planoconvex lenses need to be manually altered. The use of LED's and/or a controller is not disclosed in Miyamoto '681. The suggested combination of the Hall '783 and Miyamoto '681 references would not result in the elements of the present claims. In addition, there is no motivation provided by either or both of the cited references which would suggest the desirability of the combination. This non-suggested combination fails to teach at least one controller which is in electric communication with light emitting diodes for selectively activating the light emitting diodes to create at least two different types of visually distinctive warning light signals simultaneously and/or in combination.

In order for the combination of Hall '783 and Miyamoto '681 to be made, the references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination (see *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462; 221 USPQ 481, 488 (Fed. Cir. 1984)).

Hall '783 is a free-standing marker light designed for Amish buggies or to mark hazards (see column 1, lines 9-17). There is no motivation to provide the free-standing marker light of Hall '783 with the traffic sign of Miyamoto '681.

The Miyamoto '681 reference is silent and does not teach any information with the exception of a directional indicator as a portion of an illuminated sign. Applicant herein respectfully asserts that the Miyamoto '681 reference is directed to such a removed and non-analogous art as to be non-applicable herein. In addition, Applicant respectfully asserts that the Miyamoto '681 reference is non-analogous art as applied to Applicant's claims herein. Applicant respectfully requests the Examiner reconsider and withdraw the obviousness rejection of claim 51 pursuant to 35 U.S.C. §103 in view of the combination of Hall '783 and Miyamoto '681.

No suggestion, motivation, or teaching is provided in the Miyamoto '681 reference for incorporation of LED's into a device controlled by at least one controller used to simultaneously generate at least two different types of visually distinct warning light signals. No suggestion, motivation, or teaching is provided in the Miyamoto '681 reference for incorporation of LED's into a device controlled by at least one controller to generate at least two different types of visually distinct warning light signals in at least one combination. No suggestion, motivation, or teaching is provided in the Miyamoto '681 reference for combination with any other reference to simultaneously generate at least two different types of visually distinct warning light signals.

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No suggestion, motivation, or teaching is provided in the Miyamoto '681 reference for combination with any other reference to provide the illumination of at least two visually distinct warning light signals in at least one combination.

The stated purpose of Miyamoto '681 reference to redirect or reuse existing light for use in traffic signals would be destroyed when applied to Applicant's claims herein, in that, there is no suggestion or teaching or motivation to use LED's and LED's are not illuminated by the redirection and reuse of existing light.

There is no teaching, suggestion, or motivation in Miyamoto '681 to use at least one "controller in electric communication with the light emitting diodes", to control the patterns and/or sequences of different types of LED light signals. Any alleged combination of Miyamoto '681 with Hall '783 to produce either a flasher circuit or sequencer circuit, either individually or in combination, would improperly "require a substantial reconstruction and redesign of the elements shown in Miyamoto and Hall as well as a change in the basic principle under which the Miyamoto and Hall construction was designed to operate." (*In re Ratti*, 270 F.2d at 813, 123 USPQ at 352.).

One of ordinary skill in the art would recognize that a complete "redesign" would be required to modify the Miyamoto '681 and/or Hall '783 references to produce a DC circuit with at least one controller in order to control the LED operation. In addition, a redesign is required to make the Hall '783 reference operational as a result of the inherent short of Figure 3. The Applicant respectfully asserts that the obviousness rejection based on a combination of Hall '783 with Miyamoto '681 is improper because the intended purpose of Hall '783 is destroyed by the combination of Hall '783 with Miyamoto '681. (*In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir 1984).

The Declaration of Roman Marjamaa also asserts that the Miyamoto '681 patent as directed to the use of an illuminated traffic indicator does not address the problems which have been identified related to the generation of two or more different types of light signals either simultaneously and/or in combination. Mr. Marjamaa has rendered his opinion that the invention described in the present application would not have been obvious to a person of ordinary skill in the art following a review of the Hall '783 patent and the Miyamoto '681 patents either individually and/or in combination.

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Formalities

If an extension of time is required to make this response timely and no separate petition is enclosed, Applicant hereby petitions for an extension of time sufficient to make the response timely. In the event that this response requires the payment of government fees and payment is not enclosed, please charge Deposit Account No. 22-0350.

Conclusion

It is believed that previously presented claims 1-25 in the present application are in condition for allowance in view of the foregoing. Applicant respectfully requests reconsideration of the claims herein and that the rejections be withdrawn and the claims be allowed. The Applicant respectfully requests that the Examiner enter the amendment which Applicant believes puts the application in condition for allowance. Early action to that effect is earnestly solicited.

Respectfully submitted,

VIDAS, ARRETT & STEINKRAUS

Date: 12-6, 2004

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